MONTANA FISH, WILDLIFE & PARKS

1400 South 19th Avenue
Bozeman, MT 59718-5496

June 17, 2020

To: Governor's Office, Tim Baker, State Capitol, Room 204, P.O. Box 200801, Helena, MT 59620-0801
Environmental Quality Council, State Capitol, Room 106, P.O. Box 201704, Helena, MT 59620-1704
Dept. of Environmental Quality, Metcalf Building, P.O. Box 200901, Helena, MT 59620-0901
Dept. of Natural Resources & Conservation, P.O. Box 201601, Helena, MT 59620-1601
Montana Fish, Wildlife & Parks:

Director's Office	Parks Division	Lands Section	FWP Commissioners
Fisheries Division	Legal Unit	Wildlife Division	Design & Construction

MT Historical Society, State Historic Preservation Office, P.O. Box 201202, Helena, MT 59620-1202
MT State Parks Association, P.O. Box 699, Billings, MT 59103
MT State Library, 1515 E. Sixth Ave., P.O. Box 201800, Helena, MT 59620
James Jensen, Montana Environmental Information Center, P.O. Box 1184, Helena, MT 59624
Janet Ellis, Montana Audubon Council, P.O. Box 595, Helena, MT 59624
George Ochenski, P.O. Box 689, Helena, MT 59624
Jerry DiMarco, P.O. Box 1571, Bozeman, MT 59771
Montana Wildlife Federation, P.O. Box 1175, Helena, MT 59624
Wayne Hurst, P.O. Box 728, Libby, MT 59923
Jack Jones, 3014 Irene St., Butte, MT 59701
Jack Atcheson, 2309 Hancock Avenue, Butte MT 59701
U.S. Army Corp of Engineers, Helena
U.S. Fish and Wildlife Service, Helena
U.S. Fish and Wildlife Service, 420 Barrett Street, Dillon, MT 59725
Big Hole Watershed Committee, P.O. Box 931, Butte, MT 59703
Montana Trout Unlimited, P.O. Box 7186, Missoula, MT 59807
Dan Vermillion, FWP Commissioner, Livingston MT
Earnest and Colleen Bacon, 2215 Fishtrap Creek Road, Wisdom, MT 59761
Dept. of Natural Resources and Conservation, 730 N. Montana Street, Dillon, MT 59725-9424
George Grant Chapter of Trout Unlimited, P.O. Box 563, Butte, MT 59703
Skyline Sportsmen, P.O. Box 173, Butte, MT 59703
Anaconda Sportsmen, 2 Cherry, Anaconda, MT 59711
E.T. Bud Moran, Chairman CSKT, PO Box 278, Pablo, MT 59855
Al Lubeck, 2710 Amherst, Ave, Butte, MT 59701
Adam Rissien, ORV Coordinator, Wildands CPR, PO Box 7516, Missoula, MT 59807
Josiah Pinkham, Tribal Arch., Nez Perce Tribe, PO Box 365, Lapwai, ID 83540
John and Sandy Gordon, 119033 Juniper Acres Rd, Butte, MT, 59750
Phil Ralston, 54289 MT Highway 43, Wise River, MT 59762
Martin White, 3308 46th Ave. SE, Mandan ND, 58554-4730
Jerry Lussie, 305 Main Street, Anaconda, MT 59711
Jim Schmeller, Montana Living Trust, 4935 Everett Rd, Akron, OH 44333
Kieth and Jean Rankin, P.O. Box 28, Anaconda, MT 59711
Richard Seddon, 2017 Harrison Ave# 237, Butte, MT 59701
Haddox Ventures LLC, 9141 Briar Forest Dr., Huston, TX 77024
Frank Stanchfield, 62311 Hwy 43, Wise River, MT 59762
Mathew White, 4977 Foothill Rd, Butte, MT 59701

Lewis Pesanti, 1424 Sunrise Ln, Butte, MT 59701
Jim Street, 448 Red Fox Rd., Wise River, MT 59762
Donna Brown, P.O. Box 4, Wise River, MT 59762
Jim Bacon, 1000 Bossard Rd, Anaconda, MT, 59711
Bart Bacon, 3014 Carter St, Butte, MT, 59701
Wade Fellin, 36894 Pioneer Mountains Scenic, Wise River, MT 59762
Don Stodden, P.O. Box, 96, Wise River, MT 59762
Debbie and Mike Robbins, 750 Alder Creek Rd, Wise River MT 59762
J.P. Gordon, 709 Illinois St., Butte, MT 59701
Tony Schoonen, 3609 Willoughby, Butte, MT 59701
Lee Krugerud, 1541 Lower Seymour Lake Rd, Wise River, MT 59762
Jason Barlman, 1901 Florence, Butte MT 59701
Steve Lubeck, 17 Queens Court, Butte, MT 59701
Scott Reynolds, 7263 Cobiac Drive, Saint James City, FL 33956
Jack Hencock, 1374 Deep Creek Rd. Wise River, 59762 and 14366 E. 29th Place, Yuma, Az. 85367
Ken Schmidt, 2946 N. Cable Rd, Anaconda MT 59711

Ladies and Gentlemen:

The enclosed Environmental Assessment (EA) has been prepared for two proposed projects in the French Creek drainage on the Mount Haggin Wildlife Management Area. The first proposed action would stabilize eroding stream banks on roughly 1-mile reach of French Creek downstream of the newly reconstructed Highway 569 bridge crossing. The cause of the erosion in this reach of stream appears to be past land management. The meadow on the west side of French Creek appears to have been actively irrigated for pasture grasses. These actions converted riparian vegetation to shallow-rooted pasture grasses. These pasture grasses are being actively eroded by most outside meander bends of French Creek on the west side of the valley. The proposed restoration would include excavating a bench on outside meander bends that would be low enough to access ground water. The shallow rooted pasture grasses would be replaced by deeply rooted sedges and willows harvested from the inside bends of the stream. Twenty-one streambanks have been identified for restoration totaling roughly 3,000 ft of streambank. A secondary action of this project would include the activation of a historic side channel to the west of the existing channel. The purpose of channel activation is to provide additional fish habitat, particularly for juvenile fish, and to encourage the natural reestablishment of riparian vegetation between the side channel and main channel of French Creek.

The second proposed action involves restoring fish passage in the upper reaches of French Gulch. French Gulch was extensively placer mined from 1894 through the early 1900's. The most extensively mined area is upstream of Julius Gulch. At the head of this area is a steep cascade that connects the historic elevation of the stream to the post mining elevation of the valley bottom. This roughly 30 ft high cascade is a barrier to fish passage, and no fish are present in the nearly two miles of stream upstream. FWP, in partnership with the Big Hole Watershed Committee, is proposing to restore fish passage in the cascade reach by creating a series of step pools that would be engineered to allow fish to migrate upstream and repopulate the stream. A culvert from an old road crossing is located at the upstream terminus of the cascade is proposed for removal. Several unstable banks downstream of the cascade would be treated with hand techniques to reduce erosion.

The purpose of these two projects is to improve fish habitat and reduce sediment loading.

Montana Fish, Wildlife & Parks invites you to comment on the attached proposal. The public comment period will be accepted until 5:00 p.m. July 17. Comments should be sent to the following:

Montana Fish, Wildlife & Parks
c/o Stream Bank Restoration and Placer Mining Reclamation
1820 Meadowlark Ln.
Butte, MT 59701

Sincerely,

Mark Deleray
Region 3 Supervisor

Attachment

MONTANA FISH, WILDLIFE & PARKS
FISHERIES DIVISION

Environmental Assessment for Stream Bank Restoration in French Creek and additional Placer Mining Reclamation in French Gulch, Big Hole River Drainage

PART I: PROPOSED ACTION DESCRIPTION

A. Type of Proposed Action: The proposed projects would occur in the French Creek drainage on the Mount Haggin Wildlife Management Area. The first proposed action would stabilize eroding stream banks on roughly 1-mile reach of French Creek downstream of the newly reconstructed Highway 569 bridge crossing. The cause of the erosion in this reach of stream appears to be past land management. The meadow on the west side of French Creek appears to have been actively irrigated for pasture grasses. These actions converted riparian vegetation to shallow-rooted pasture grasses. These pasture grasses are being actively eroded by most outside meander bends of French Creek on the west side of the valley. The proposed restoration would include excavating a bench on outside meander bends that would be low enough to access ground water. The shallow rooted pasture grasses would be replaced by deeply rooted sedges and willows harvested from the inside bends of the stream. Twenty-one streambanks have been identified for restoration totaling roughly 3,000 ft of streambank. A secondary action of this project would include the activation of a historic side channel to the west of the existing channel. The purpose of channel activation is to provide additional fish habitat, particularly for juvenile fish, and to encourage the natural reestablishment of riparian vegetation between the side channel and main channel of French Creek.

The second proposed action involves restoring fish passage in the upper reaches of French Gulch. French Gulch was extensively placer mined from 1894 through the early 1900's. The most extensively mined area is upstream of Julius Gulch. At the head of this area is a steep cascade that connects the historic elevation of the stream to the post mining elevation of the valley bottom. This roughly 30 ft high cascade is a barrier to fish passage, and no fish are present in the nearly two miles of stream upstream. FWP, in partnership with the Big Hole Watershed Committee, is proposing to restore fish passage in the cascade reach by creating a series of step pools that would be engineered to allow fish to migrate upstream and repopulate the stream. A culvert from an old road crossing is located at the upstream terminus of the cascade is proposed for removal. Several unstable banks downstream of the cascade would be treated with hand techniques to reduce erosion.

The purpose of these two projects is to improve fish habitat and reduce sediment loading.

B. Agency Authority for the Proposed Action:

- Mount Haggin Wildlife Management Area Interim Management Plan (1980)

The interim management plan states that Mount Haggin WMA will be managed for dispersed outdoor recreation activities that are consistent with the area's ability to support such use without degradation of its natural resource values (wildlife, fisheries, vegetation, and cultural/historical resources). The plan describes activities that are aimed at protecting the basic soil, vegetation, and water resources of the WMA that will maintain or enhance wildlife and fish habitat.

C. Estimated Commencement Date:

Bank stabilization:

Action	Completion Date
Construction Mobilization	10/1/20
Construction of project	10/10/20
Demobilization and access reclamation	11/30/20

Placer Mining Restoration:

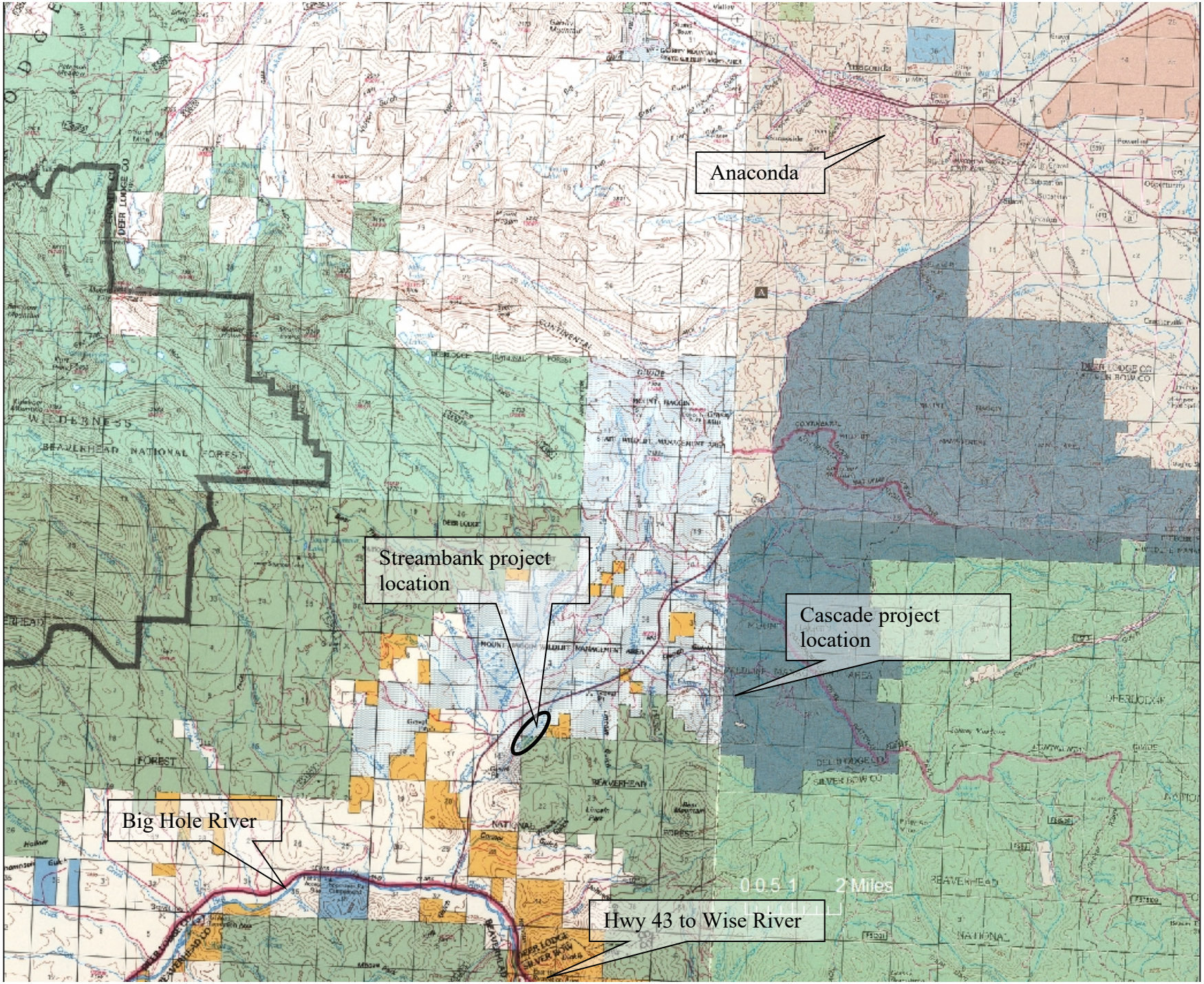
Action	Completion Date
Construction Mobilization	Summer 2021 or 22
Construction of project	Fall 2021 or 22
Demobilization and access reclamation	Fall 2021 or 22

D. Name and Location of the Project**:** Stream bank restoration in French Creek and placer mining restoration in French Gulch, Big Hole River Drainage

The project location on French Creek is Deer Lodge County approximately 15 miles southeast of the town of Anaconda, Montana; T2N R12W Sec 10, T2N R11W Sec5.

E. Project Size (acres affected)

1. Developed/residential – 0 acres
2. Industrial – 0 acres
3. Open space/Woodlands/Recreation – Placer mining restoration will affect 0.5 acres of woodlands.
4. Wetlands/Riparian – 1.3 acres of riparian area will be impacted as a result of the streambank restoration.
5. Floodplain –1.3 acres of floodplain will be impacted through banks stabilization work.
6. Irrigated Cropland – 0 acres


Anaconda
Streambank project location
Cascade project location
Big Hole River
Hwy 43 to Wise River
0 0.5 1 2 Miles
BEAVERHEAD NATIONAL FOREST
DEER LODGE CO
SILVER BOW CO
BEAVERHEAD

F. Narrative Summary of the Proposed Action and Purpose of the Proposed Action

1. Streambank Stabilization:

The Mount Haggin Wildlife Management Area (WMA, Figure 1) was acquired by Montana Fish, Wildlife and Parks (FWP) in 1976 from the Mount Haggin Livestock Company through the Nature Conservancy. Prior to state ownership, the land was used for multiple purposes including sheep and cattle ranching. The west side of French Creek downstream of Highway 569 crossing appears to have been an irrigated hay meadow (Figure 2). Evidence of relict irrigation ditches are present on the west side of the valley. These agricultural practices appear to have converted what was likely formerly riparian vegetation into pasture grasses. These pasture grasses are shallow rooted and as French Creek migrates to the west it regularly undercuts the shallow rooted grasses causing calving into the stream. Interestingly, east of French Creek there is a healthy riparian area with abundant sedges and willows, more typical of reaches of French Creek both upstream and downstream of this location. Outside meanders on the east side of the stream are more stable and provide larger and deeper pools. However, nearly every outside bend on the west side of the stream is actively eroding, and each year large clumps of sod and topsoil erode into the stream (Figure 3). The active erosion is also causing the stream to be wide and shallow with few pools. Additionally, two meander bends in this reach of stream are at risk of failure and meander breaching which would cause additional significant erosion.

FWP is proposing to stabilize the eroding streambanks in this reach of stream by excavating the topsoil and pasture sods from the outside of 21 streambanks and creating a bench near the low-water surface elevation. The width of the bench would range from 10-20 ft, and it would access groundwater from the stream. Native sedge sods and willows from the inside of adjacent bends would be excavated and transplanted onto the bench to instantly create vegetation and stability. Excavated pasture sods would be disposed of either in the voids created on the inside meander or in an upland area away from the stream and floodplain. Lowering the outside meander bends and stabilizing them with deeply rooted vegetation like sedges and willows will aid in stabilizing the streambanks and slowing erosion. Banks proposed for treatment have been rated based on their degree of current erosion and potential for future erosion as either Lower Risk, Moderate Risk, or Higher Risk (Figure 2). As funding allows, FWP is proposing to restore streambanks in order of priority from high to low. No materials will be imported to do the proposed work, only native materials would be used. The work would be done with excavators and limited use of haul equipment such as dump trucks. Access to the construction site will be from Highway 569. An historic two-track road exists from the highway down to the hay pasture. The number of trips across the pasture with equipment will be limited since no material will be imported to the project site. Pending funding, it is anticipated that is project would commence in the fall of 2020.

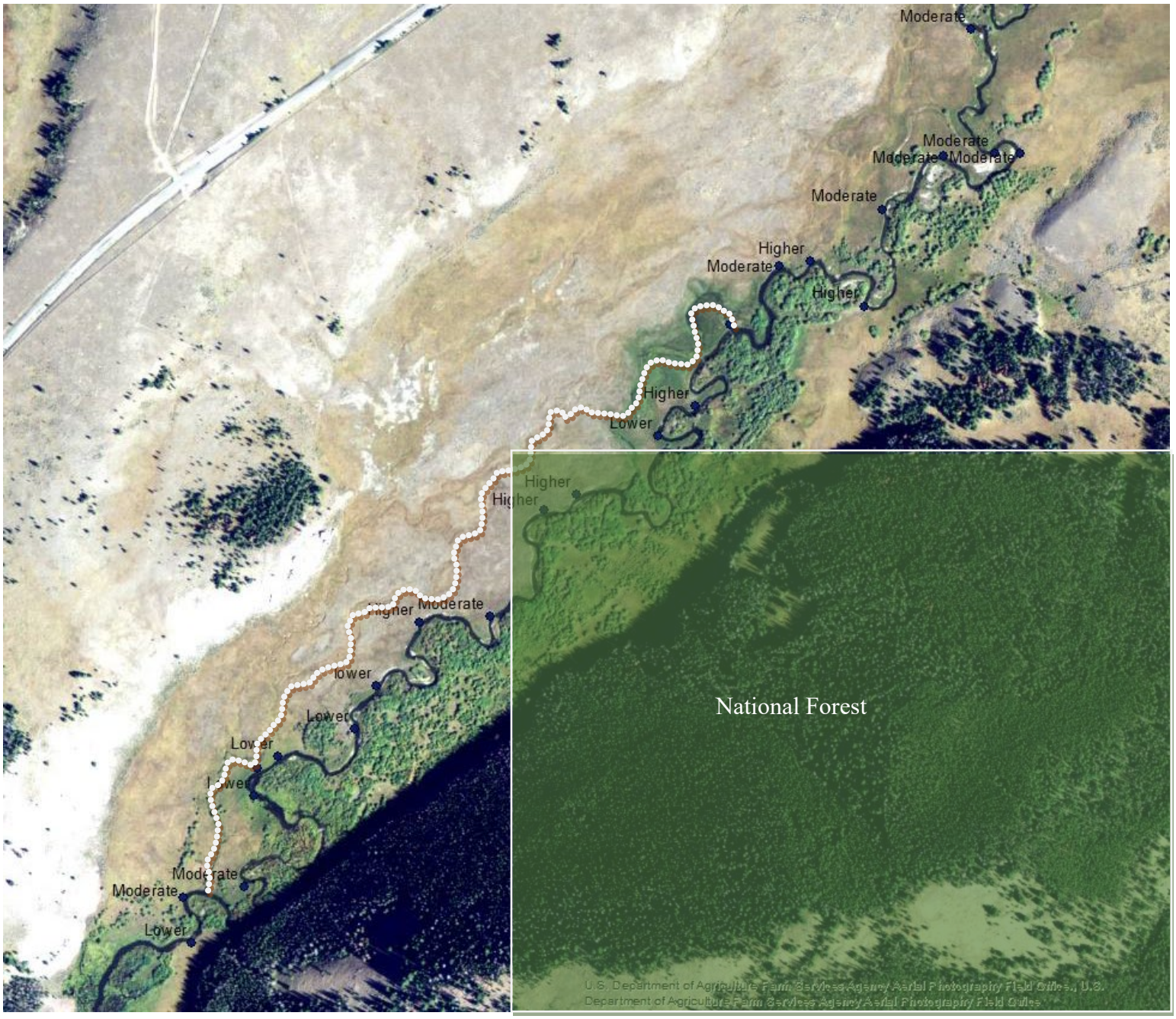


Figure 3. Map of French Creek on the Mount Haggin Wildlife Management Area showing meander bends proposed for streambank stabilization work. Historic stream channels are also evident to the west of the stream channel including the one (dotted line) proposed for reactivation. Also shown is Highway 569 in the upper left of photo.

Figure 3. Photos of eroding streambanks proposed for restoration on French Creek. Note collapsing pasture sods on outside bends which would be removed and replaced with the sedges and willows from the inside bend.

In addition to direct streambank treatments, FWP is proposing to activate a historic side channel of French Creek which parallels the stream for approximately 3000 ft. The goals of this channel activation are to provide additional fish habitat, particularly for juvenile fish, and aid in the establishment of riparian vegetation. Relic channels flowing through the meadow also suggest that the valley may have had a wide riparian area similar to that present on the east side of the stream. By reactivating the side channels, it is anticipated that the vegetation between the channels and the main channel will begin to revert back to riparian species such as sedges and willows. Reestablishing proper vegetation in the floodplain of French Creek will ensure the long-term stability of the stream channel. To reactivate this channel, it will be necessary to raise the elevation of the streambed of French Creek at the head of the channel roughly 12 inches and remove the plug in the channel mouth. To raise the elevation of the streambed, the long homogenous riffle immediately downstream of the side channel would be excavated in two locations to create two pools. The excavated material would be place at the head of the riffle immediately downstream of the side channel mouth and graded slowly downstream. The flow targets would be to have 1-3 cfs of water in the side channel during base flows (roughly 10-30% of the flow in French Creek) with approximately 1/3 of the stream flow in the side channel at high flows.

A small portion of the proposed project area lies on the Beaverhead-Deerlodge National Forest. Two banks proposed for treatment and a small portion of the activated side channel are on National Forest (Figure 2). The Forest Service is conducting their own environmental review for their portion of the project.

2. Placer mining restoration:

Gold was first discovered 1864 in French Gulch and a sizable mining camp was established in that drainage with year-round occupants. The French Gulch area, including First Chance Creek, Moose Creek, and parts of French Creek, were mined on and off through the early 1900's. Two hard rock mines were also present at the headwaters of French Gulch. In French Gulch, including First Chance Creek more than 6 miles of stream was mined from one side of the valley to the other often down to the bedrock (more than 30 ft down). Water was diverted from American, Moose and other streams to French Gulch to supply water and hydraulic power to equipment used to excavate gravels and extract gold. Placer mining was more or less continuous, at varying scales and by various methods, from 1864 to 1911.

The most extensively mined area of French Gulch was immediately upstream of the confluence of Julius Gulch. Large water cannons (known as Hydraulic Giants) were used to hydraulically blast away the adjacent hill slopes so that the removed material could be sluiced for gold. The spoils of these mining activities often ended up in the stream and floodplain. In the upper gulch a steam hoist or "Donkey" and derrick were employed raising and moving boulders out of the way. This extensive mining and subsequent erosion have lowered the elevation of the valley and the stream roughly 30 ft, disconnecting the old stream elevation upstream from the new elevation of the stream downstream resulting in a 30 ft tall cascade (Figure 4). At the terminus of this cascade French Gulch flows through what is known as the Chinese Wall (Figure 5). This is reach of stream flanked by nearly vertically stacked boulders as high as 13 ft. The mining upstream of the cascade likely lead to the extirpation of fish and the cascade has prevented potential recolonization of the stream. Additionally, the straightened stream channel downstream of the Chinese Wall is actively eroding into the adjacent hillslope causing significant sedimentation into the stream.

Figure 4. Cascade at head of Chinese wall connecting the old elevation of the valley (arrow) with the new elevation in the bottom of the photo.

Figure 5. French Gulch flowing through the head of mined area through what is referred to as the Chinese Wall immediately downstream of the cascade fish barrier.

To restore fish passage, FWP in cooperation with the Big Hole Watershed Committee is proposing to create a new stream channel in the location of the cascade. The goal of the new channel is to lessen the grade of stream and to provide pools and jumping habitat so fish can successfully negotiate the cascade and access the habitat upstream. Given the limited length of stream in the reach and not wanting to impact the historically significant Chinese wall, a design was developed to zigzag the stream channel back and forth in a step pool configuration to create additional stream lengh and resting areas for fish as they ascend the cascade, similar to a salmon ladder. The steps would be constructed of native boulders many of which are greater than 3 ft in diameter. There would be a total of approximatley 25

step pools over a length of 263 ft of zigzag stream channel. Each step would have an average drop of just over 1 ft. An engineering firm has developd a preliminary design for the construction of the fish passage way.

Immediately upstrem of the cascade there is a road and culvert crossing of French Gulch. This concrete culvert is failing and is also a fish barier (Figure 6). This culvert and fill that is in the floodplain will be remvoed in conjuction with the construciton of the cascade. Additional erosion areas are present downstream of the Chinese wall that have resulted from stream straightening. These small eroding areas will be treated by hand to reduce erosion and encourage natural vegetation establishnment. Access to the construction site is via an existing road which is closed during the summer to motorized access.

Figure 6. Culvert crossing of French Gulch at head of cascade that is also an impediment to fish passage.

PART II. ALTERNATIVES

A1. No Action

Under the No Action Alternative, the stream habitat conditions in French Creek and French Gulch would remain in their existing condition with poor stream bank conditions, chronic sediment loading and no fish passage. There would be no improvements to water quality and fish habitat in French Creek and the headwaters of French Gulch would remain fishless. The No

Action Alternative is the easiest and cheapest alternative considered; however, it would not accomplish the goals of improving habitat, water quality and fish passage. If these improvements are not made fish numbers will remain depressed in French Creek due to chronic erosion, and the headwaters of French Gulch would remain fishless. This would not aid in the accomplishing FWP's goal of restoring habitat and native species to the French Creek drainage. Therefore, while the most cost effective, the No Action Alternative does not improve aquatic and riparian habitat or improve water quality in the short term or long term.

A2. Full Stream Channel and Floodplain Restoration

Alternative 2 for French Creek would consist of full stream channel and floodplain restoration. For this alternative the entire floodplain on the west side of the French Creek would be manipulated to facilitate the re-establishment of riparian rather than pasture plant species. This would involve the excavation of a new appropriately-sized floodplain adjacent to French Creek. Pasture sods would be removed for 30-60 ft from the stream and the ground surface elevation would be lowered. The stream banks could be reformed with riparian sods borrowed from the inside bends of the stream, but the remaining floodplain would have to be seeded. The material removed during floodplain construction would have to hauled off site and disposed of in an upland area. While this alternative would produce full floodplain restoration of French Creek and long-term sediment delivery would be drastically reduced, the overall cost of the project would be much greater. It is estimated that full floodplain restoration would cost between $200,000 and $300,000. Further it would result in a larger project footprint and initial disturbance during construction. Alternative 2 was not chosen as the preferred alternative for this action because of it is believed that the preferred alternative would result in the same benefits for roughly 1/8 the cost.

Alternative 2 for French Gulch would involve relocating the existing channel to the east and increasing the length of the channel in order to decrease the stream gradient. Moving the stream to the east would require substantial earth work to accomplish. The area to the east of the French Gulch stream channel was heavily mined and consists of piles of boulders. To create a stream channel and floodplain in this area would require the removal of over 72,000 cubic yards of material and would cost over $800,000 to accomplish. Furthermore, given the high gradient nature of the stream channel in this area, it is unlikely that the new channel would provide high quality fish habitat. Since the primary goal of this part of the project is to provide fish passage, the Preferred Alternative accomplishes this goal for roughly 1/10 the total cost of Alternative 2.

A3. Proposed Action

Alternative A3 is the preferred alternative for stream bank stabilization in French Creek (described in more detail above). Alternative A3 would involve the construction of a bankfull bench on the outside meander bands of 21 stream banks using native sods borrowed from local sources. Over 3,000 ft of stream bank are proposed for treatment for a total cost of $40,000. In addition, nearly 3,000 ft of abandoned side channel habitat is being proposed for reactivation. This action should result in the conversion of pasture grasses to riparian species through time in the area between the 2 channels. This will ensure the long-term stability of the stream channel stabilization work and will aid in the reestablishment of a healthy riparian area. The proposed

action would achieve the goals of long-term sediment reduction because streambanks would be stable, and the stream would have an adequate floodplain to dissipate energy during the highest flows. With improved water quality it is anticipated that aquatic life should also improve, including the fishery.

The preferred alternative for French Gulch is to create a step pool structure within the existing footprint of the channel. To lessen the grade the channel will need to zigzag 2 times with a total of 25 step pools. The pools and channel will be constructed of native boulders harvested from the adjacent placer mined area. It is anticipated that the total project cost will be roughly $110,000. This includes some minor stream bank work that would be done by hand downstream of the Chinese Wall. This is the preferred alternative because it is the lowest cost alternative and it accomplishes the goals of the project. Further, it has the fewest impacts on culturally significant resources in the area.

PART III. ENVIRONMENTAL REVIEW

A. PHYSICAL ENVIRONMENT

1. LAND RESOURCES Will the proposed action result in:	IMPACT Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Soil instability or changes in geologic substructure?			X		Yes	1a
b. Disruption, displacement, erosion, compaction, moisture loss, or over-covering of soil which would reduce productivity or fertility?			X		Yes	1b
c. Destruction, covering or modification of any unique geologic or physical features?		X				
d. Changes in siltation, deposition or erosion patterns that may modify the channel of a river or stream or the bed or shore of a lake?			X		Yes	1d
e. Exposure of people or property to earthquakes, landslides, ground failure, or other natural hazard?		X				

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Comment 1a: The restoration of French Creek will disturb the existing soil and could produce temporary instability if a large-flow event occurs before vegetation becomes rooted and fully established. A large-flow event could erode newly transplanted sods and soils. However, the restoration techniques used have been proven effective in other projects and proper engineering has been done on this project to prevent and/or mitigate any impacts to soils. FWP has concluded that the risk of large-scale failure and soil erosion using the techniques proposed is minimal. The intent of this restoration is to reestablish natural function and stable stream banks of French Creek. Very little soil disturbance will occur in French Gulch. The soils in the

propose construction area have been previously washed away. Overall, soil stability in the project area is expected to increase in the future as a result of this project.

Comment 1b: The restoration of French Creek will require the borrowing of riparian sods and woody riparian plants to reconstruct the stream banks and the bankfull bench on outside meander bends of the stream. Most of these sods will be harvested from the inside meander bends and planted on the outside bends. Excess sods and soils will be disposed of in upland areas where they will not be prone to erosion and the area will be reseeded. Therefore, there will be no net loss of productivity in the area.

Comment 1d: The intent of the restoration work proposed in French Creek is to reduce the erosion of the high stream banks on the west side of the stream to improve water quality and fish habitat. The new stream banks would be lower and would result in a wider floodplain which should dissipate the energy of high flows and reduce long-term erosion.

Because the fish passageway in French Gulch would be constructed of large boulder substrate it is not anticipated to erode or cause sedimentation downstream.

2. WATER **Will the proposed action result in:**	**IMPACT Unknown**	**None**	**Minor**	**Potentially Significant**	**Can Impact Be Mitigated**	**Comment Index**
a. Discharge into surface water or any alteration of surface water quality including but not limited to temperature, dissolved oxygen or turbidity?			X		Yes	2a
b. Changes in drainage patterns or the rate and amount of surface runoff?		X				
c. Alteration of the course or magnitude of flood water or other flows?		X				2c
d. Changes in the amount of surface water in any water body or creation of a new water body?		X				
e. Exposure of people or property to water related hazards such as flooding?		X				
f. Changes in the quality of groundwater?		X				
g. Changes in the quantity of groundwater?		X				
h. Increase in risk of contamination of surface or groundwater?		X				
i. Effects on any existing water right or reservation?		X				
j. Effects on other water users as a result of any alteration in surface or groundwater quality?		X				
k. Effects on other users as a result of any alteration in surface or groundwater quantity?		X				
l. Will the project affect a designated floodplain?		X				
m. Will the project result in any discharge that will affect federal or state water quality regulations? (Also see 2a)			X		Yes	2m

Comment 2a: The vast majority of construction work proposed in French Creek will occur outside of the flowing water on the banks. Some work such as the elevation of the streambed to activate the side channel will cause some turbidity during construction. This work, however, should be short term (competed in less than 1 day), and the impacts would be minor.

It is possible that some of the restoration work done in French Creek could fail during the first high water after construction. After 1-2 years vegetation should become established and provide stream bank stability and reduce risk of project failure. In FWP's determination the risk of bank failure is minimal, and the restoration work proposed will restore proper function to the system. Restoring the function of the stream and floodplain will mitigate any short-term failures of the bank treatments. Also, when considered in the context of the history of mining in the drainage, any turbidity generated from the proposed restoration work would be insignificant.

A fish barrier not associated with this project has been constructed downstream of this location. The impoundment created upstream of the fish barrier will help to mitigate any impacts from turbidity generated through restoration activities. The impoundment upstream of the barrier should allow for fine sediments to settle thus reducing water quality impacts downstream.

The fish passage channel on French Gulch will be constructed in the dry. A temporary diversion will route the streamflow around the project construction area. There will be minor amounts of turbidity when the diversion is constructed and when it is removed to reactivate the stream channel, otherwise no turbidity would be generated as a result of the project.

Comment 2m: Construction will result in the generation of minor amounts of turbidity. This will require obtaining permits from the Montana DEQ who regulates and enforces laws regarding water quality. Regulation of storm water will also occur to prevent storm discharge from degrading water quality. This discharge is also regulated by the Montana DEQ, and all necessary permits will be obtained prior to construction.

Cumulative Impacts: Minor amounts of turbidity are anticipated during project construction. However, one of the long-term objectives of this project is to improve water quality through the restoration of degraded streams, floodplains and uplands. Therefore, cumulatively this project is expected to provide long-term benefits to water quality.

3. AIR **Will the proposed action result in:**	**IMPACT Unknown**	**None**	**Minor**	**Potentially Significant**	**Can Impact Be Mitigated**	**Comment Index**
a. Emission of air pollutants or deterioration of ambient air quality? (also see 13 (c))			X		Yes	3a
b. Creation of objectionable odors?		X				
c. Alteration of air movement, moisture, or temperature patterns or any change in climate, either locally or regionally?		X				

d. Adverse effects on vegetation, including crops, due to increased emissions of pollutants?		X				
e. Will the project result in any discharge which will conflict with federal or state air quality regs?		X				

Comment 3a: Machinery that will be used for restoration work would increase exhaust fumes in the area. This impact should be minor and temporary as there are no air quality restrictions in the area and the amount and duration of the emissions should be minimal. Airborne dust from construction work in the area will increase through the excavation of dry sediments and construction traffic. The majority of roads that will be used to perform the work described above are unimproved dirt roads and therefore, as machinery travels the roads dust will be generated. Traffic use of the access roads will increase over existing use with construction activities, but the production of dust should only pose local minimal impacts to air quality. The area is also remote and there are no residences within view of either construction area.

Cumulative Impacts: Impacts to air quality from the proposed actions would be short term and minor. FWP does not expect the proposed action to result in other actions that would create cumulative impacts to air quality in the French Creek drainage. Nor does FWP foresee any other activities in the basin that would add to impacts of the proposed action.

4. VEGETATION **Will the proposed action result in:**	**IMPACT Unknown**	**None**	**Minor**	**Potentially Significant**	**Can Impact Be Mitigated**	**Comment Index**
a. Changes in the diversity, productivity or abundance of plant species (including trees, shrubs, grass, crops, and aquatic plants)?			X		Yes	4a
b. Alteration of a plant community?		X				
c. Adverse effects on any unique, rare, threatened, or endangered species?		X				4c
d. Reduction in acreage or productivity of any agricultural land?		X				
e. Establishment or spread of noxious weeds?			X		Yes	4e
f. Will the project affect wetlands, or prime and unique farmland?		X				

Comment 4a: The restoration in the French Creek will result in the disturbance and alteration of plant communities in the areas proposed for renovation. Pasture sods will be removed from the outside meander bends to create a bankfull bench. Riparian sods and mature woody plants would be transplanted to the outside meander banks identified for restoration. This material will be collected from the inside of adjacent meander bends. The borrow sources will be filled with

soils from the outside bend and allowed to naturally revegetate. Dormant willow stakes may also be harvested and used to establish willows along the outside banks. These willow stakes would be harvested from local plants in the French Creek drainage. Any excess soils and sods generated from this project would be transported to an upland area, graded, and reseeded with and upland seed mix.

It is hoped that by reactivating the historic side channel of French Gulch the plant species between this channel and the main channel of French Creek will change through time. One of the objectives of this project and management in general on Mt Haggin is to increase the quantity and quality of riparian areas. It is hoped that by wetting the floodplain of French Creek that the existing pasture grasses will convert to wetland species such as sedges and willows.

In French Gulch the primary plant species that will be disturbed are lodge pole pine trees and a few small willows. To accommodate the zig-zag nature of the proposed stream channel the valley will need to be slightly widened. This will require the removal of a small amount of lodgepole pine and some minor amounts of willows. No other vegetation would be disturbed. The borrow area for the large boulders is mostly void of vegetation.

Comment 4c: The following information was extracted from a Biological Recourses Report prepared for Montana Department of Transportation (MDT) which covers the same area as the work proposed work for this project (MDT 2014). The Montana Natural Heritage Program identified two plant Species of Concern (SOC) within one mile of the project area: Hooker's balsamroot (*Balsamorhiza hookeri);* and Primrose monkeyflower *(Mimulus primuloides)*. The whitebark pine (*Pinus albicaulis)* is a candidate species for listing under the Endangered Species Act.

Hooker's balsamroot (*Balsamorhiza hookeri*) has a Montana state rank of S3 and a global rank of G5 (Natureserve 2013). Hooker's balsamroot is not ranked by any federal agencies such as USFWS, USFS, and BLM. Hooker's balsamroot is found in sagebrush steppe, in open and woodland environments at elevations from 4,500 to 7,000 ft. It is primarily located on well drained soils, but also found on gravel to clay soils. Hooker's balsamroot is found throughout the western US. It is known in Montana in only two places: in the vicinity of Monida and within the Mount Haggin WMA. The Mount Haggin WMA occurrences are the northeastern-most known population of the species.

Hooker's balsamroot occurs within the proposed construction zone of the project area. Five occurrences of Hooker's balsamroot are reported within ½ mile of Secondary 569 in the vicinity of the project. However, no sites have been identified within the proposed construction area for placer mining or the fish barrier. This plant occurs in the vicinity of the access road leading to the French Creek project. However, impacts can be reduced by limiting traffic to the existing 2 track road that access the former hay meadow. No Hooker's balsamroot have been identified in the pasture area.

Primrose monkeyflower (*Mimulus primuloides*) has a Montana state rank of S3 and a global rank of G5 (Natureserve 2013). Primrose monkeyflower is also ranked as sensitive by two federal agencies including USFS and BLM. Primrose monkeyflower is typically found in wet meadows

and montane fens often dominated by Sphagnum moss in the alpine and subalpine zones. These zones include moderate-to-high elevation systems found throughout the Rocky Mountains. They are dominated by mostly herbaceous species associated with wetter sites with very low-velocity surface and subsurface flows. These systems typically occur in cold and moist basins with seeps and alluvial terraces of headwater streams (Hansen et al., 1995). Primrose monkeyflower occurs throughout the west coast from Washington to California, east to southwestern Montana.

Primrose monkeyflower is not known to occur within the proposed project area slated for active construction. The known occurrence reported by the *Species of Concern Data Report* is located north of the project area at a higher elevation and within a more predominate wet meadow with adjacent forests communities. Based on current knowledge of the location of the plant and proposed design, the project would not impact the primrose monkeyflower. It is possible that the plant species is present in wet areas adjacent to areas slated for placer mining restoration, but none have been identified. The cascade area lacks vegetation in general so it is highly unlikely that this species would be present in the construction area.

Whitebark pine is a candidate species that occurs in the major mountain ranges of Montana at high elevations and in subalpine habitat. The project area does not contain any habitat suitable for whitebark pine. No whitebark pine trees were observed during field surveys. Due to the lack of whitebark pine or occurrence of suitable habitat in the project area, the proposed project is ***not likely to jeopardize the continued existence*** of the whitebark pine. Therefore, no further analysis of whitebark pine is necessary in this document.

Comment 4e: Machinery and equipment used during the project may inadvertently carry noxious weeds to the project site. Proposed mitigation to reduce or eliminate noxious weed establishment includes the washing of all construction equipment and vehicles before entry onto the project site and removal of mud, dirt, and plant parts before moving into the project area. FWP performs routine weed monitoring and spraying on the WMA. The disturbed areas will be monitored by FWP for the presence of weeds following construction activities and any weeds identified will be treated.

Cumulative Impacts: Negative impacts to vegetation from the proposed action would be short term and minor; however, the positive impacts of vegetation restoration are anticipated to be long term and substantial. FWP does not expect the proposed action to result in other actions that would create cumulative impacts to vegetation in the French Creek drainage. FWP does not foresee any other activities that would add to impacts of the proposed action. As such there are no anticipated cumulative impacts to vegetation related to the proposed action.

5. FISH/WILDLIFE **Will the proposed action result in:**	**IMPACT Unknown**	**None**	**Minor**	**Potentially Significant**	**Can Impact Be Mitigated**	**Comment Index**
a. Deterioration of critical fish or wildlife habitat?		X				
b. Changes in the diversity or abundance of game animals or bird species?			X		Yes	5b

c. Changes in the diversity or abundance of nongame species?			X		Yes	5c
d. Introduction of new species into an area?		X				
e. Creation of a barrier to the migration or movement of animals?		X				
f. Adverse effects on any unique, rare, threatened, or endangered species?			X			5f
g. Increase in conditions that stress wildlife populations or limit abundance (including harassment, legal or illegal harvest or other human activity)?			X			5g
h. Will the project be performed in any area in which T&E species are present, and will the project affect any T&E species or their habitat? (Also see 5f)		X				See 5f
i. Will the project introduce or export any species not presently or historically occurring in the receiving location? (Also see 5d)			X			5i

Comment 5b: It is likely that birds and mammals will be temporarily displaced during construction activities that due to increased human traffic in the area. These impacts should be short term and minor. The proposed construction activities are expected to be completed within 60 days for both French Creek and French Gulch. Further, there are abundant similar habitats adjacent to the project area that displaced animals can occupy until construction is complete. Construction timing (fall) will avoid important breeding times for birds and most mammals.

Comment 5c:

Aquatic Invertebrates:

Some aquatic invertebrates will be disturbed when material is excavated from the riffles in French Creek in order to activate the side channel. This will result in minor and temporary impacts to aquatic invertebrates. Most aquatic invertebrates have been shown to be highly resilient to such disturbances, and within one year there is no detectible difference before and after disturbance. One possible exception to this resiliency is the imperiled western pearlshell mussel. This long-lived and rare species in French Creek could be impacted by such disturbance. While the species generally does not inhabit higher gradient riffles with coarse substrate, such as those proposed for excavation in French Creek, a survey will be conducted beforehand to determine if mussels are present. If any mussels are found, they will be relocated upstream of the disturbed area.

It is anticipated that restoration in French Gulch would have short-term direct impacts on aquatic invertebrates. These impacts will come primarily though the dewatering and reconstruction of the existing stream channel. The invertebrates that are present in the existing channel will be cut

off from surface flows once water is diverted around the project site. Groundwater will likely be present in the abandoned channel, but flow will likely be greatly reduced. Further, the construction that will take place in the channel will manipulate the substrates and disturb aquatic invertebrate habitat. However, these impacts are considered minor because both upstream and downstream of the proposed restoration reach in French Gulch there are areas of undisturbed stream that will serve as sources for invertebrates to colonize the new channel. It is anticipated that within 1 year of restoration that aquatic invertebrates will have fully recovered in the restored stream segment.

Comment 5f: *Terrestrial Organisms:* The following information was extracted from a Biological Recourses Report prepared for Montana Department of Transportation (MDT) which covers the same area as the proposed work for this project (MDT 2014). A search of the Montana Natural Heritage database indicated that eight terrestrial or avian Species of Concern (SOC) could occur within a 1-mile radius of the proposed project area: great blue heron (*Ardea herodias*), northern goshawk (*Accipiter gentilis*), great gray owl (*Strix nebulosa*), Clark's nutcracker (*Nucifraga columbiana*), veery (*Catharus fuscescens*), Cassin's finch (*Carpodacus cassinii*), and wolverine (*Gulo gulo luscus*). There are 2 federally listed species that may be present in the proposed project area. The grizzly bear (*Ursus arctos horribilis)* and the Canada Lynx *(Lynx canadensis)* are listed Threatened. The wolverine (*Gulo gulo luscus)* is a proposed species for listing under the Endangered Species Act.

Potential Impacts to Terrestrial Wildlife Species of Concern Potential impacts to these species are listed below:

- Direct loss of habitat associated with ground disturbance related to placer mining restoration.
- Noise disturbance associated with construction activities that displaces animals or renders habitat less desirable or unusable.

Potential adverse impacts from proposed construction activities to avian species of concern are expected to be minor and short-term. One of the goals of the mining restoration is to enhance riparian habitat. Most of the impacts to bird habitat will occur to an existing or former riparian area, but these impacts should be minor and short term as the new riparian area becomes established.

Grizzly Bear (Ursus arctos horribilis)

The grizzly bear is listed as a threatened species in the lower 48 states. Five recovery areas have been designated: Yellowstone Ecosystem, Northern Continental Divide Ecosystem, Cabinet-Yaak Ecosystem, Selkirk Ecosystem, and the Northern Cascade Ecosystem. Human-caused mortality and habitat loss are considered to be the primary threats to grizzly bears.

The proposed project does not occur in any of the designated recovery areas. Grizzly bears are not known to frequent the Mount Haggin Wildlife Management Area; however sporadic occurrences of grizzly bears in the general area have been reported historically and recently. Historic records indicate grizzly bear use in the area during the 1920's. More recently, in 2006, a grizzly was recorded in the Mount Haggin WMA and in 2005 an illegal kill of a grizzly bear was documented in the general area of the WMA. The Montana Natural Heritage Program database

also shows grizzly bear use in adjacent Beaverhead and Powell counties. A recent DNA analysis of bear hair collected on the WMA showed all hair sampled to be from black bears, not grizzlies. While it appears that grizzly bear numbers are low and there is no documented occupancy in the general area, due to the wide-ranging nature of grizzly bears it is possible that individuals may travel through or incidentally occur in the project area.

The project is not anticipated to result in long-term adverse impacts to the grizzly bear or to grizzly bear habitat. Construction activities are unlikely to affect grizzly bears. It is concluded that the proposed project implementation will have no significant direct, indirect, or cumulative effects on the grizzly bear and will not result in loss of grizzly bear habitat. During construction, garbage or other substances may attract bears which poses potential harm or a mortality threat to individual bears. Overall the restoration of habitat in reaches of stream should improve habitat conditions for grizzly bears and their food sources.

Canada Lynx (*Lynx canadensis*)

Canada lynx areva federally-listed threatened species that occurs in Deer Lodge County. After analyses of information on species of concern from Montana Natural Heritage Program and the review of data from USFWS, it was concluded that Canada lynx may potentially pass through the project area. The following sections on the Canada lynx provide information that addresses: 1) species description; 2) status and distribution; 3) life history and habitat requirements; 4) reasons for decline; 5) environmental baseline/occurrence in project area; 6) actions/impacts and cumulative effects; 7) recommended conservation and coordination measures; and 8) determination of effect.

According the USFWS and correspondence with Montana Natural Heritage Program, the proposed project area is not located within critical habitat for Canada lynx. However, due to its close proximity to sub-alpine, mesic mixed conifer, and woodland forest ecosystems the project area may potentially provide a movement corridor for Canada lynx. The land surrounding the project area is undeveloped forest grasslands managed by FWP, USFS and BLM. Canada lynx require contiguous habitat with ground and overhead cover in montane forests, therefore the immediate project area does not contain suitable habitat. Canada lynx may have potential incidental occurrences within the project area; however, lynx surveys conducted between 1999 and 2001 within the Beaverhead-Deerlodge National Forest detected no lynx. From 2001 to 2005, 11,220 miles of winter snow-tracking surveys and trap route checks on the Beaverhead-Deerlodge National Forest detected no verified lynx tracks. Additional surveys also failed to detect any lynx, and it was concluded that most of the Beaverhead-Deerlodge National Forest was not suitable lynx habitat. These data suggest that Canada lynx are unlikely to occur in the project area, however due to the project's proximity to undeveloped forest lands there is the potential for incidental movement through the project area.

Canada lynx have specific habitat requirements consisting of continuous forested areas with dense understory vegetation. These specifications exist within and adjacent to the immediate project area. However, data indicate that their presence is unlikely. It is concluded that the proposed project will have no significant direct, indirect, or cumulative effects on the Canada lynx. Conservation measures designed to avoid and minimize potential impacts to Canada lynx should consist of monitoring of the project area for the presence of the species prior to and

throughout the duration of construction activities. If a Canada lynx is observed within the project area during project construction activities, FWP will contact USFWS for instruction. If present in the project area, restrictions on certain construction activities or areas of limited access may be recommended.

Aquatic organisms:

Westslope Cutthroat Trout
WCT is a SOC and has a Montana state rank of S2 and global rank of G4T3. It is listed as a Tier I species in the FWP *Fish and Wildlife Conservation Strategy*; meaning that the species is in greatest conservation need. The US Forest Service Region 1 Regional Forester has designated the westslope cutthroat trout as sensitive on the Beaverhead-Deer Lodge National Forest. The BLM has designated this species as a sensitive species in Montana. One of the purposes of the proposed project is to restore habitat for WCT in the French Creek drainage. There are no anticipated negative impacts to WCT by the proposed action because the species has not yet been restored to the drainage. Once non-native fish are removed, non-hybridized WCT reintroduced to French Creek and its tributaries the restored stream should provide improved habitat for native fish. In French Gulch and additional 1.7 miles of stream will be available for cutthroat that otherwise would remain fishless.

Arctic Grayling
Arctic grayling is a SOC and has a Montana state rank of S1 and global rank of G5. It is listed as a Tier I species in the FWP *Fish and Wildlife Conservation Strategy*; meaning that the species is in the greatest conservation need. The US Forest Service Region 1 Regional Forester has designated the Arctic grayling as sensitive on the Beaverhead-Deer Lodge National Forest. The species was petitioned for listing under the Endangered Species Act and was a candidate species for several years. In 2014, the USFSW determined that listing the Arctic grayling was not warranted at this time and a lawsuit was filed shortly after objecting to the decision. The intent of the proposed project is to restore stream habitat that would benefit Arctic grayling in the French Creek drainage. Recent surveys did not find grayling in French Creek, but anecdotal evidence suggests that adult fish may seasonally frequent French Creek. Once the stream channel is restored and non-native fish are removed, Arctic grayling from the Big Hole drainage will be reintroduced to French Creek and its tributaries. The improved habitat conditions in French Creek and in areas downstream of the restored streambanks which suffer from excessive sedimentation will benefit Arctic grayling.

Western Pearlshell Mussels
The western pearlshell (*Margaritifera falcata*) mussel has a Montana state rank of S2 and a global rank of G4G5. It is listed as a Tier I species in the FWP *Fish and Wildlife Conservation Strategy*, meaning that the species is in the greatest conservation need and has been recently designated (2011) as a USFS Region 1 Sensitive Species. The western pearlshell's shell is elongate and dark colored with a pink-purplish inside (nacre); adults typically range from 50 to 85 mm with old individuals exceeding 100 mm. Adults are sedentary and rarely move more than a few meters throughout their lives. The western pearlshell is Montana's only cold-water trout stream mussel and is found on both sides of the Continental Divide. In Montana, it is in serious

decline and at risk statewide, especially populations in the Upper Missouri River. Within the Upper Missouri River Basin, tributaries to the Beaverhead and Big Hole (Bloody Dick, Deep Creek, and Clam Creek) and upper Madison Rivers hold viable populations. Mussels occur in French Creek and in several locations more than two miles downstream in Deep Creek. The populations identified within the project area are listed as non-viable with no reproduction or with a fair population density (<25 individuals per 50m) but still no juveniles present. Evidence of limited reproduction was noted in the 2013 when 1 juvenile mussel (4 cm) was found in an 800 ft reach of stream downstream of the project area. With no or limited reproduction, these populations are not likely to persist into the future.

In general, there is a small probability of increased sedimentation in French Creek during construction and for a period of time after construction even with usual sediment control measures. Sediment release due to construction activity will be short-term and temporary and is likely to decrease over time as disturbed ground stabilizes. Ultimately, long-term sediment loading is anticipated to be dramatically reduced as a result of the proposed restoration activities. Prior to the activation of the side channel, the existing stream channel will be searched for mussels and any individuals encountered will be moved upstream of the project reach and released in suitable habitat. Translocations optimally would occur late-July to September when reproductive stress is low and metabolic rate is sufficient for effective re-burrowing into the substrate. It is anticipated that once habitat conditions have improved and native restored, mussel populations will increase in French Creek.

Comment 5g. There is the potential for displacement of some animals during the implementation of this project (see Comment 5f). Mule deer, elk, other big game species and species mentioned above (Comment 5f) may be temporarily displaced as crews are present in the drainages performing the proposed work. However, these impacts should only be minor and temporary. No long-term negative impacts to wildlife populations and positive impacts are anticipated as habitat is restored.

Comment 5i: Westslope cutthroat trout and Arctic grayling were historically present in the French Creek drainage. Only one small population of WCT remains in the headwaters of American Creek, and no grayling have been found by FWP in French Creek but angler-reported catches have been noted. The intent of this project is to restore habitat to benefit native species.

Cumulative Impacts: Impacts to fish and wildlife from the proposed action would be short term and minor. FWP does not expect the proposed action to result in other actions that would create cumulative impacts to fish and wildlife resources within the proposed restoration streams. FWP does not foresee any other activities in the basin that would add to impacts of the proposed action. As such there are no cumulative impacts to non-target organisms.

B.HUMAN ENVIRONMENT

6. NOISE/ELECTRICAL EFFECTS Will the proposed action result in:	IMPACT Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Increases in existing noise levels?		X				6a
b. Exposure of people to serve or nuisance noise levels?		X				
c. Creation of electrostatic or electromagnetic effects that could be detrimental to human health or property?		X				
d. Interference with radio or television reception and operation?		X				

Comment 6a: The presence of large machinery in French Creek and French Gulch to construct the project will result in increased noise generation. Construction work in the drainage could occur from August through November as conditions allow. There are no residences within one mile of the project. Noise impacts would be limited only to those who may be driving by or recreating temporarily in the area.

Cumulative Impacts: Increases in noise from the proposed action would be short term and minor. FWP does not expect the proposed action to result in other actions that would create increased noise in the streams or drainages proposed for restoration. FWP does not foresee any other activities in the basin that would add to impacts of the proposed action. As such there are no cumulative impacts related to noise from the construction.

7. LAND USE Will the proposed action result in:	IMPACT Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Alteration of or interference with the productivity or profitability of the existing land use of an area?		X				
b. Conflicted with a designated natural area or area of unusual scientific or educational importance?		X				
c. Conflict with any existing land use whose presence would constrain or potentially prohibit the proposed action?			X			See 7c
d. Adverse effects on or relocation of residences?		X				

Comment 7c: During construction, public access to the immediate construction area would be closed to reduce public risk. The length of the closure would depend on the amount of time active construction is occurring but is not anticipated to last more than 60 days.

Cumulative Impacts: Impacts on land use from the proposed action would be short term and minor. FWP does not expect the proposed action to result in other actions that would impact land use. FWP does not foresee any other activities in the basin that would add to impacts of the proposed action. As such there are no cumulative impacts related to land use from the proposed project.

8. RISK/HEALTH HAZARDS **Will the proposed action result in:**	**IMPACT Unknown**	**None**	**Minor**	**Potentially Significant**	**Can Impact Be Mitigated**	**Comment Index**
a. Risk of an explosion or release of hazardous substances (including, but not limited to oil, pesticides, chemicals, or radiation) in the event of an accident or other forms of disruption?			X		YES	8a
b. Affect an existing emergency response or emergency evacuation plan or create a need for a new plan?		X				
c. Creation of any human health hazard or potential hazard?		X				
d. Will any chemical toxicants be used?		X				

Comment 8a: There is a minor risk of oil or fuel being spilled from heavy machinery that would construct the proposed project. A fueling location will likely be established by the contractor performing the proposed work. This location will be fitted with appropriate fuel containment devices in the event of a spill. It is possible that a ruptured line or tank could also spill oil or fuel. Machinery will be inspected prior to mobilization, and any leaks will be fixed. In the event that a leak is discovered, that equipment would be evaluated and the leak fixed prior to further use.

Cumulative Impacts: Health hazards from the proposed action would be short term and mitigated through closure of restoration area to public during construction. FWP does not expect the proposed action to result in other actions that would increase the risk of health hazards. FWP does not foresee any other activities in the basin that would add to health impacts of the proposed action. As such there are no cumulative impacts related health hazards from the proposed treatments.

9. COMMUNITY IMPACT Will the proposed action result in:	IMPACT Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Alteration of the location, distribution, density, or growth rate of the human population of an area?		X				
b. Alteration of the social structure of a community?		X				
c. Alteration of the level or distribution of employment or community or personal income?		X				
d. Changes in industrial or commercial activity?		X				
e. Increased traffic hazards or effects on existing transportation facilities or patterns of movement of people and goods?			X			9e

Comment 9e. Construction traffic will increase during restoration. These impacts should be limited primarily to the primitive roads that access the site. Some construction traffic will also use Highway 569 which could slow the movement of people. However, traffic on Highway 569 is light and it is anticipated that increased truck traffic will be minimal.

10. PUBLIC SERVICES/TAXES/UTILITIES Will the proposed action result in:	IMPACT Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Will the proposed action have an effect upon or result in a need for new or altered governmental services in any of the following areas: fire or police protection, schools, parks/recreational facilities, roads or other public maintenance, water supply, sewer or septic systems, solid waste disposal, health, or other governmental services? If any, specify: _____		X				
b. Will the proposed action have an effect upon the local or state tax base and revenues?		X				
c. Will the proposed action result in a need for new facilities or substantial alterations of any of the following utilities: electric power, natural gas, other		X				

fuel supply or distribution systems, or communications?						
d. Will the proposed action result in increased used of any energy source?		X				
e. Define projected revenue sources		X				
f. Define projected maintenance costs		X				

11. AESTHETICS/RECREATION **Will the proposed action result in:**	**IMPACT Unknown**	**None**	**Minor**	**Potentially Significant**	**Can Impact Be Mitigated**	**Comment Index**
a. Alteration of any scenic vista or creation of an aesthetically offensive site or effect that is open to public view?		X				
b. Alteration of the aesthetic character of a community or neighborhood?		X				
c. Alteration of the quality or quantity of recreational/tourism opportunities and settings? (Attach Tourism Report)		X				
d. Will any designated or proposed wild or scenic rivers, trails or wilderness areas be impacted? (Also see 11a, 11c)		X				

12. 12/HISTORICAL RESOURCES **Will the proposed action result in:**	**IMPACT Unknown**	**None**	**Minor**	**Potentially Significant**	**Can Impact Be Mitigated**	**Comment Index**
a. Destruction or alteration of any site, structure or object of prehistoric historic, or paleontological importance?		X				
b. Physical change that would affect unique cultural values?			X		Yes	12b
c. Effects on existing religious or sacred uses of a site or area?		X				
d. Will the project affect historic or cultural resources?			X		Yes	12b

Comment 12b: Cultural inventories in the areas adjacent to those proposed for restoration or construction have been conducted by GCM Services Inc. of Butte, MT. The inventories on French Creek have identified cultural resources on the west and north of the proposed project area. GCM Services Inc in Butte has been contracted to perform a cultural inventory specific to this project but those analyses have not been completed because of snow conditions at the site. Because of the movement of the stream channel in French Creek it is not expected that cultural resources would be present in the heart of the willow bottom where the proposed streambank

work would occur on French Creek. In French Gulch there are substantial cultural resources related to past placer mining; however, the stream bottom where most of the construction activities are to occur will not likely contain historical resources that would be threatened by the project. The Chinese wall has been identified as culturally important but will not be disturbed as a result of this project. Because the cultural inventory has not been completed, FWP will not proceed with the project until on the ground surveys can be completed and any needed adjustments to the design have been made to avoid or mitigate for impacts to cultural resources. The project will not move forward until the State Historical Preservation Office has reviewed the findings of GCM and given cultural clearance.

13. SUMMARY EVALUATION OF SIGNIFICANCE **Will the proposed action, considered as a whole:**	**IMPACT Unknown**	**None**	**Minor**	**Potentially Significant**	**Can Impact Be Mitigated**	**Comment Index**
a. Have impacts that are individually limited, but cumulatively considerable? (A project or program may result in impacts on two or more separate resources which create a significant effect when considered together or in total.)		X				
b. Involve potential risks or adverse effects which are uncertain but extremely hazardous if they were to occur?		X				
c. Potentially conflict with the substantive requirements of any local, state, or federal law, regulation, standard or formal plan?		X				
d. Establish a precedent or likelihood that future actions with significant environmental impacts will be proposed?		X				
e. Generate substantial debate or controversy about the nature of the impacts that would be created?		X				
f. Is the project expected to have organized opposition or generate substantial public controversy? (Also see 13e)		X				
g. List any federal or state permits required.						13g

Comment 13g: The following permits would be required:

MT FWP 124
MT DEQ 318
USACE 404/401
Deer Lodge County Floodplain Permit
Stormwater Discharge Permit

PART IV. OVERLAPPING AGENCY JURISDICTION

A. Name of Agency and Responsibility
   a. US Army Corps of Engineers administers the Section 404 and 401 certifications.
   b. A portion of the project may occur within an area with a designated floodplain by Deer Lodge County therefore a floodplain permit may be required.
   c. Montana Fish Wildlife and Parks administers the Stream Protection Act (SPA 124) and therefore a permit would be required from this agency.

PART V. AGENCIES THAT HAVE CONTRIBUTED OR BEEN CONTACTED

A. Name of Agency

   a. Montana Department of Environmental Quality.
   b. Montana Department of Fish, Wildlife & Parks
   c. US Army Corps of Engineers
   d. Montana Natural Heritage
   e. Montana State Historical Preservation Office
   f. USDA Forest Service
   .

PART VI. ENVIRONMENTAL IMPACT STATEMENT REQUIRED?

After considering the potential impacts of the proposed action and possible mitigation measures, FWP has determined that an Environmental Impact Statement is not warranted. The impacts of stream channel restoration as described in this document are minor and/or temporary and mitigation for many of the impacts is possible. The primary negative impacts as a result of this project are temporary disturbance related to construction activities. Impacts to aquatic invertebrates have been shown to be short term (1-2 years) and minor and invertebrate communities are very resilient to disturbances.

Prepared by : Jim Olsen, Fisheries Biologist Date: June 17, 2020

Submit written comments to: Montana Fish, Wildlife & Parks
c/o Stream Bank Restoration and Placer Mining Reclamation
1820 Meadowlark Ln.

Butte, MT 59701

Comment period is 30 days. Comments must be received by 5:00 p.m. July 17, 2020.

PART V. REFERENCES

Bosworth, D. N., K. B. Clarke and J. Baughman. 2006. Policies and Guidelines for Fish and Wildlife Management in National Forest and Bureau of Land Management Wilderness.

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DEQ. 1996. Risk-Based Cleanup Guidelines for Abandoned Mine Sites. Final Report. State of Montana Department of Environmental Quality, Abandoned Mine Reclamation Bureau, 1520 E. 6th Ave, Helena, MT 59620.

DEQ. 2009. Middle and Lower Big Hole Planning Area TMDLs and Water Quality Improvement Plan. Montana Department of Environmental Quality, P.O. Box 200901, Helena, MT 59620-0901

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